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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BALAOING, ARIEL A

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,551	Applicant(s) NONOYAMA, YASUMASA	
	Examiner ARIEL BALAOING	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-10 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/28/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the abstract contains more than 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by CHUAH et al (US 6,377,548 B1).

Regarding claim 1, CHUAH discloses a time-division synchronous wireless modem device [**base station**] provided at each of a plurality of wireless stations [**remote hosts**] in a wireless system [**wireless communication network**] which transmits and receives communication packets containing a header between the individual wireless stations via one wireless channel by using, on a one-by-one basis, any of communication slots obtained through time division of a predetermined transmission cycle period by a predetermined unit transmission time, the time-division synchronous wireless modem device (abstract; it is noted that a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or

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the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951)) being characterized by comprising: a modem unit which transmits and receives the communication packets (col. 5, line 9-27; wireless communication inherently requires a transmission and reception means); a communication state determination unit which obtains a transmission cycle period and the total number of wireless stations in use each contained in a header [**MAC header**] of the received communication packet (col. 5, line 27-53; col. 13, line 66-col. 14, line 12; col. 16, line 27-63; MAC headers used to determine uplink and downlink reservation. Quality of Service is used to determine scheduling of new connections); and a transmission timing controller which selectively determines an arbitrary one of the communication slots in a next transmission cycle period when the communication packet is not received during the entire span of the one transmission cycle period, or selectively determines the one of the communication slots to be used by estimating a vacant one of the communication slots in the next transmission cycle period from the transmission cycle period and the total number of wireless stations in use each obtained by the communication state determination unit when the communication packet is received (abstract; col. 11, line 54-col. 12, line 25; minislots are dynamically assigned using a contention based system and available minislots).

Regarding claim 6, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. CHUAH further discloses characterized in that the transmission timing controller determines, after the transmission, whether or not transmission therefrom has been performed normally from information on the total number of wireless stations contained in the header of the communication packet transmitted from another wireless station (col. 11, line 42-62; acknowledgment of received packet).

Regarding claim 7, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. CHUAH further discloses characterized by comprising an information processing unit for dividing large-capacity information which cannot be transmitted by using one of the communication slots into data trains **[fragments]** each transmittable by using one of the communication slots, and characterized in that the transmission timing controller controls a transmission timing to allow each of the data trains to be transmitted by using a vacant one of the communication slots (col. 19, line1-35).

Regarding claim 8, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. CHUAH further discloses characterized in that the information processing unit checks the presence or absence of abnormality in any of the received data trains and requests retransmission when the abnormality is found or requests re-synthesis of the data trains when the abnormality is not found (col. 11, line 42-62; col. 14, line 12-28 retransmission of data not acknowledged).

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHUAH et al (US 6,377,548 B1) in view of GUMMALLA et al (US 2002/0021711 A1).

Regarding claim 9, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. However, CHUAH does not expressly disclose characterized in that the transmission timing controller controls a transmission timing such that, based on a request to transmit non-periodic continuous information inputted from an outside, the communication slot is used continuously for the non-periodic continuous information preferentially to another communication. In a similar field of endeavor, GUMMALLA discloses a transmission timing controller controls a transmission timing such that, based on a request to transmit non-periodic continuous information inputted from an outside, a communication slot is used continuously for the

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non-periodic continuous information preferentially to another communication (Figure 4, 5; paragraph 62-67; non-periodic data (voice stream) is scheduled within slots based on available resources). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify CHUAH to include the teachings of GUMMALLA, since GUMMALLA states that such a modification that such a modification would increase efficiency of providing bandwidth for voice traffic (paragraph 15).

Regarding claim 10, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. CHUAH further discloses characterized in that the transmission timing controller resumes, after the transmission of the non-periodic continuous information is completed, the transmission of information transmitted on a per transmission-cycle-period basis that cannot be transmitted due to the transmission of the non-periodic continuous information (Figure 4, 5; paragraph 62-67; transmission of data during silence or deactivation of voice stream reservation).

Allowable Subject Matter

7. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the prior art of record does not expressly disclose at least one reduced transmission cycle period composed of an integral fraction of the transmission

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cycle period is predetermined to allow transmission and reception to be performed based on either of the transmission cycle period and the reduced transmission cycle period; and the transmission timing controller selects one of the transmission cycle period and the reduced cycle period, and selectively determines an arbitrary one of the communication slots in the next selected transmission cycle period or reduced cycle period when the communication packet is not received during the entire span of the selected transmission cycle period or reduced cycle period, or selectively determines the one of the communication slots to be used by estimating a vacant one of the communication slots in the next selected transmission cycle period or reduced cycle period from the transmission cycle period and the total number of wireless stations in use each obtained by the communication state judging unit when the communication packet is received.

Claims 3-5 are allowed as being dependent on allowable subject matter.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JORGENSEN (US 2002/0099854 A1) – Transmission control protocol

LEE et al (US 6,529,520 B1) – Method and device for bandwidth allocation in multiple access protocols

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARIEL BALAOING whose telephone number is

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(571)272-7317. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, V. Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ariel Balaoing/
Examiner, Art Unit 2617

/A. B./
Examiner, Art Unit 2617